

**Claims**

- 5 1. Moulding consisting of a porous inorganic monolithic moulding which is coated with at least one organic polymer.
2. Moulding according to Claim 1, characterised in that the porous inorganic monolithic moulding consists of  $\text{SiO}_2$ .
- 10 3. Moulding according to Claim 1 or 2, characterised in that the porous inorganic monolithic moulding has a bimodal pore structure with mesopores having a diameter of between 2 and 100 nm and macropores having a mean diameter of greater than 0.1  $\mu\text{m}$ .
- 15 4. Moulding according to one or more of Claims 1 to 3, characterised in that the organic polymer is polystyrene and/or polymethacrylate.
5. Moulding according to one or more of Claims 1 to 4, characterised in that the organic polymer is physisorbed on the inorganic moulding.
- 20 6. Process for the production of porous inorganic monolithic mouldings which are coated with at least one organic polymer, by
- a) provision of a porous inorganic monolithic moulding
  - b) impregnation of the porous inorganic monolithic moulding from step a) with a coating solution comprising at least organic prepolymers or
  - 25 organic mono- and/or oligomers.
  - c) coating of the moulding, where the moulding, during the coating, is clad in an impermeable manner, at least on the long sides, with an inert material or stored in an inert solvent
  - d) washing and drying of the moulding from step c) for the removal of
  - 30 reaction residues and solvent

7. Process according to Claim 6, characterised in that step c) the prepolymers or monomers and/or oligomers are precipitated from the coating solution onto the inorganic moulding.

5 8. Process according to Claim 7, characterised in that the precipitation is carried out by lowering the temperature.

9. Use of a moulding according to one or more of Claims 1 to 5 for the chromatographic separation of at least two substances.

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